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ABSTRACT

This review of the literature on employer satisfaction with vocational education graduates is based on a search for representative studies with different methodologies and from different sources. Observations made are organized into four basic categories: (1) theoretical considerations in conducting research; (2) methodological considerations in the design of studies; (3) the identification of vocational students; and (4) the identification of employers. Selected conclusions from this section are these: an accurate measure of employer satisfaction should be developed; universal and workable definitions for terms such as graduates, completers, leavers, and employers must be used; and variances for curriculum and types of programs must be made. Reasons cited and developed in the paper for assessing employer satisfaction with vocational education graduates are to validate worth; identify needed improvements; improve education/employer relations; improve guidance services; bolster recruitment; enhance labor force capability; and satisfy legislative mandates. Five proposed policy and research positions conclude the paper. They include those concerning philosophical issues about the collection of information and the actual collection of information and its subsequent use. (Abstracts of the documents reviewed are appended--ten general employer surveys and eighteen employer follow-up studies.) (MEK)

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Information Series No. 204

ASSESSING EMPLOYER SATISFACTION WITH VOCATIONAL EDUCATION GRADUATES

written by

F. Marion Asche and Daniel E. Vogler

Virginia Polytechnic Institute and State University

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
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1980

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FOREWORD

Follow-up of former students has been both a tradition and a legislative mandate for vocational education. While follow-up studies have concentrated on the training-related employment of vocational students, a number of studies have also been designed to ascertain the relative satisfaction of employers with vocational education and its students. The Education Amendments of 1976 (P.L. 94-482) now require that one element of evaluation and one type of data to be aggregated nationwide by the Vocational Education Data System (VEDS) is employer satisfaction with the training of former vocational education students. Under present VEDS requirements, employers are asked to provide an overall rating of an individual's vocational training as it relates to the job and in relation to other employees in the work group who have not had vocational training. Legislative requirements such as those included in VEDS are evidence of the growing concern over the identification of means to evaluate the effectiveness of vocational education.

Employer satisfaction with vocational education graduates is a primary goal of the vocational education system. Employer surveys, therefore, are important to vocational educators as a means of determining the success of their programs. The present authors have researched the types of employer surveys conducted and have appended abstracts of the major types of studies. In addition, they have analyzed the problems inherent in employer surveys, the theoretical and methodological issues involved, and the implied benefits of information on employer satisfaction for vocational educators.

"Assessing Employer Satisfaction with Vocational Education Graduates" is one of six interpretive papers produced during the second year of the National Center's knowledge transformation program. The review and synthesis in each topic area is intended to communicate knowledge and suggest applications. Papers in the series should be of interest to all vocational educators including teachers, administrators, federal agency personnel, researchers, and the National Center staff.

The profession is indebted to Dr. F. Marion Asche and Dr. Daniel E. Vogler for their scholarship in preparing this paper. Recognition is also due Dr. Daniel L. Householder, Texas A and M University; Dr. Joel D. Galloway, Ferris State College; and Dr. Lyn Brant, the National Center for Research in Vocational Education, for their critical review of the manuscript. Dr. Carol P. Kowle supervised publication of the series. Mrs. Ann Kangas and Mrs. Margaret Starbuck assisted.

Robert E. Taylor
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in Vocational Education

INTRODUCTION

The assessment of employer satisfaction with vocational education and its products is intuitively appealing. It seems logical that at least one test of vocational education's effectiveness is the extent to which former vocational students are satisfactory or unsatisfactory employees in the eyes of the employer. In fact, the Education Amendments of 1976 (P.L. 94-482) require that one element of evaluation and one type of data to be aggregated nationwide by the Vocational Education Data System (VEDS) is employer satisfaction with the training of former vocational education students.

The purpose of this document is to review and interpret the topic of employer satisfaction with vocational education graduates. The authors do not attempt to detract from or add to the intent of the legislation. Further, the document does not promote an adversary or advocacy position relative to collection of employer satisfaction data. It does attempt to identify methodological and conceptual problems as well as positive outcomes which may evolve from implementation of general policy and research recommendations.

REVIEW OF LITERATURE

A review of literature was conducted that focused on employer satisfaction with and attitudes toward vocational education and/or its products. While a review and synthesis of all available employer survey, satisfaction, and follow-up studies was beyond the scope of the present paper, every effort was made to identify, review, and incorporate representative studies with different research methodologies and from different sources.

Several search procedures were used. All potentially useful computer-accessed data bases were searched. Other procedures used included telephone, mail, and personal contacts with the National Advisory Council on Vocational Education, executive directors of selected State Advisory Councils on Vocational Education, and vocational administrators at the local level. Representatives of the National Center for Education Statistics (NCES) and research firms known to have contracted studies related to the topic were also consulted. Three recent publications by the National Advisory Council--Overview - 1975 Reports, State Advisory Councils on Vocational Education; Overview - 1976 Reports, State Advisory Councils on Vocational Education; and Overview - 1977 Reports, State Advisory Councils on Vocational Education--were reviewed to identify state-level efforts to assess employer satisfaction with vocational

graduates, as well as their perceptions and attitudes toward those graduates. The studies located by these procedures are broadly representative of the types of research currently being conducted in the area of employer satisfaction with vocational education graduates.

Overview of Current Research

Recent legislation has resulted in increased data collection from employers. Much of this new activity, however, is directed at collection of a restricted range of compliance and reporting data. It may also be assumed that the users of such data at the national level are seeking evaluative information of a summative nature, whereas users at other levels may be more concerned with formative evaluation. The present VEDS requirements for employer data may tend to result in the direct collection of a more restricted range of data from a greater number of employers.

Despite the potential value of research on employer satisfaction with vocational graduates, surprisingly little has been reported in the literature. O'Reilly and Asche (1979) conducted a national review of follow-up studies in vocational education and located 139 documents completed between the years 1970 and 1977. Twenty-nine reports were concerned with follow-up of employers. Further, nineteen instruments designed to collect employer follow-up information were identified. In another study, Gray, Abram, McKinney, and Billings (1978) identified nineteen instruments designed to measure either job performance or employers' perceptions of training.

Employer studies conducted over the past few years have been designed to suit the needs of the institution seeking the data. The formal literature has more studies related to community college programs than to secondary or adult programs. A classification of the most common data collected in employer follow-up studies (O'Reilly and Asche, 1979) during the period of 1970 to 1977 revealed that almost all of the studies asked employers to rate specific former vocational education students on selected work skills, habits, and attitudes or characteristics. Table 1 shows the percentage of instruments reviewed which asked one or more questions related to the data elements listed.

In contrast, the present VEDS requirements call for employers to rate the employee's training and preparation rather than performance in (a) technical knowledge, (b) work attitudes, or (c) work quality. In addition, under the VEDS requirement, employers are asked to provide an overall rating of the individual's vocational training as it relates to his or her job and in relation to other employees in the work group who have not had vocational training. These minimum data requirements are not intended to restrict the

TABLE 1. Number and percent of the employer follow-up instruments reviewed which included questions on selected data elements.

N=19

Data Elements*	No.	Percent
Quality of Work	16	84
Quantity of Work	14	74
Job Related Technical Knowledge	13	68
Job Skills	10	53
Operation of Tools and Equipment	11	59
Basic Academic Skills	11	59
Work Habits/Attitudes	8	42
Accept Responsibility	10	53
Punctuality	8	42
Supervision Required	10	53
Cooperation with Coworkers	15	79
Willingness to Learn and Improve	14	74
Cooperate with Management	11	59
Compliance with Rules/Policies	8	42
Attendance	12	63
Overall Satisfactoriness	11	59
Promotability	4	21

SOURCE: O'Reilly, P., and Asche, F. Follow-up Procedures: A National Review. Project report. Blacksburg, VA: Virginia Polytechnic Institute and State University, 1979.

*Data elements refer to the employer's rating of the employee on the characteristic.

collection of additional information from employers. It should be noted that the VEDS questions do not include the term "satisfaction."

Most contemporary research on employers' perceptions takes one of three basic approaches. The approaches include:

- Asking the employer/supervisor questions about specific employees who are graduates of or have received vocational training.

- Asking employers or supervisors who have hired graduates of a particular school or program questions about vocational graduates as a group.

- Sampling employers in an area and asking questions about vocational education or its graduates. In this type of study, employers have been selected according to some rationale other than prior knowledge that they employ persons with vocational training.

The authors' review of all three types of studies suggested that each approach may be providing a different result. Employer follow-up surveys conducted by state or local schools typically asked individual supervisors to rate specific employees on a number of personal and work characteristics and/or attitudes. Such data would appear to have the greatest validity when used for formative evaluation (e.g., program improvement) and, to a limited extent, for summative evaluation.

Under the second approach, responses may be shaped more by general attitudes than firsthand knowledge. With fewer experiences on which to base responses, the respondents may express their general attitudes toward vocational education.

The third approach appears to be susceptible to attitudinal bias and may be affected by stereotypes of vocational education. Although this approach is used in some studies sponsored by state advisory councils, it is doubtful that such an approach can provide high quality evaluative information. In addition, such studies typically exhibit low response rates.

A fourth approach which has gained in popularity recently is the secondary analysis of data collected for other reasons. Such secondary analyses generally have not used employer data and the intent has been to evaluate various curricula, including vocational education curricula. These studies typically are marred by methodological problems, including the failure to define precisely what constitutes a vocational education student. It thus appears that while a number of approaches have been used to collect employer feedback data, what is actually measured may

be affected by the methodology and the position of the respondent within the employing organization.

A number of recent studies representing the major types of employer surveys have been abstracted and are presented in the Appendix. While these studies do not represent an exhaustive set, they are intended to be broadly representative of current research in the area of employer satisfaction with former vocational students.

OBSERVATIONS

The limited number of existing studies on employer satisfaction with vocational education graduates makes it difficult to draw definitive conclusions about the state of the art. Some observations, however, can be made on the basis of the studies examined. These observations fall into four categories: (1) theoretical considerations in conducting research on employer satisfaction; (2) methodological considerations in designing studies; (3) concerns relative to the identification of vocational education students; and (4) concerns relative to the identification of employers. Future efforts to assess employer satisfaction with vocational education graduates should attempt to overcome some of the design problems stemming from considerations in each of these four areas.

Theoretical Considerations

The specification of what is meant by employer satisfaction presents difficulties for the potential researcher. A major body of research deals with such constructs as "work adjustment" and "job satisfaction" from the perspective of the employee. The extent to which these constructs are generalizable to the employer, however, remains a question. The Work Adjustment Project (Betz, Weiss, Dawis, England, and Lofquist, 1966) presents a conceptual framework in which the employer's assessment of the job incumbent is termed "satisfactoriness." One approach to defining employers' satisfaction with vocational education graduates, therefore, involves the assessment of the satisfactoriness of vocational graduates as employees.

The most common approach taken by vocational education researchers, however, appears to be a simple generic rating of workers who have had vocational education, rather than the consideration of a psychological construct. The approach being taken under the Vocational Education Data System (VEDS), for example, has the employer rate the training of individuals per se. Such a stance is based on the assumption of a causative relationship between

employees' performance and their vocational training. Another point of view suggests that studies of employer satisfaction with vocational education graduates may in fact assess the employers' attitudes toward or perceptions of vocational education.

From the authors' viewpoint, it is more productive to assess employer satisfaction with vocational graduates than to assess employer attitudes toward vocational education. Brophy (1959) summarizes four approaches to the construct of satisfaction based on (a) need theory, (b) expectation theory, (c) role theory, and (d) self-theory.

Approaches based on need theory appear to have the least utility for assessing employer satisfaction because they deal with latent or unconscious concerns. Need theory, with its roots in psychoanalytic theory, does not appear to provide a practical approach in that needs can not be directly observed or measured.

Expectation theory proposes that satisfaction with an activity decreases as the perceived probability of reaching a goal as a result of that activity increases. As an example of this approach, Brophy cites a study which found men in a branch of the armed services with a low promotion rate more satisfied with the promotion system than men in another branch with a higher promotion rate.

The application of this theory to the concept of employer satisfaction can be seen in the following example. An employer's goal may be to hire workers who require little or no supervision. The employer may also feel there is a high probability of obtaining the "ideal" worker from vocational education. Thus, the employer is apt to indicate low satisfaction with vocational graduates or with vocational education in general. The rating would represent the inverse of the expected probability of reaching the goal. This theory appears to have some merit for explaining the difference between a direct supervisor's and a personnel manager's rating of vocational education and its graduates.

A third approach to the construct of satisfaction is based on role theory. Two different interpretations of role theory in sociology and psychology help explain the concept of satisfaction. The sociological viewpoint holds that a role is defined in terms of the actions performed by a person to validate occupancy of a position. Roles are associated with the position and not the person occupying the position. As applied to the concept of employer satisfaction, an employer's expressed satisfaction with vocational education or its students may be related to the perceived congruence between present or past job incumbents and the role expectations of the employer.

Research in the area of ideal versus real role seems to indicate considerable overlap between expectation theory and role theory. How realistic the employer's role expectations are may determine his/her expressed satisfaction with vocational education. Under the psychological approach, a position may be modified by the person who occupies it, or a supervisor may be affected more by the person in a job than by the job itself.

A fourth approach used in research on satisfaction has been self-theory. Self-theory for the most part assumes that behavior is affected by self-concept in a manner which works in defense or reinforcement of that self-concept. An approach to satisfaction based on self-theory would indicate that satisfaction is a function of the congruence between self-concept and environmental characteristics. Super's (1963) view of vocational choice and adjustment as processes of self-implementation is an example of self-theory as applied to a vocational context. The extent to which an employer's report of satisfaction with vocational education or its graduates could be explained through self-theory is at best conjecture. The extension of self-theory from satisfaction with self to satisfaction with others represents a highly theoretical approach which could well prove difficult to test empirically in this context.

The preceding review of approaches to research on satisfaction suggests that use of the term "satisfaction" in present vocational follow-up and general survey research may not be entirely appropriate. Present research typically does not attempt to measure satisfaction but involves asking employers to rate employees. A few studies have asked employers to rate their "satisfaction" with an incumbent or group but one such item is not likely to be a reliable or valid measurement of satisfaction. Future research must clarify the kind of information needed and the relative value of the kinds of information obtained from employers. The interpretation of present findings is hampered by such lack of definition.

Methodological Concerns

A number of methodological concerns are raised by existing research on employer satisfaction with vocational education graduates. For example, several factors influence the type and quality of data typically obtained from employer surveys. These factors include: (1) who within the employing organization is asked to provide information, (2) whether information is sought on particular former students or vocational students as a group, and (3) whether employers are selected on some basis other than prior knowledge that they had hired former vocational students. The type of information sought on students and the manner in which the data are collected have also posed problems for

researchers in the past. A mailed questionnaire is the most common type of survey procedure used, although telephone and personal interviews have also been utilized. There is some question as to whether the most common survey techniques are the most effective, as many of the studies considered here had low response rates.

Perhaps the first question which should be asked from a methodological standpoint is "who needs to know what?" Many studies have not clearly identified either the research user or the user's specific information needs. Postsecondary follow-up studies appear to be more institution- and user-specific than studies at the secondary level or state-wide studies.

The approach which appears to have the greatest number of substantive methodological weaknesses is the general employer survey in which a questionnaire is mailed to either all employers in an area or state or some sample of the employer universe. Return rates in these studies have typically been extremely low (often less than 20 percent and in one case 8 percent). The representativeness of data derived from a self-selected minority of employers is suspect at best. Most of the studies which have suffered from such disappointing returns have not attempted to check for nonrespondent bias or to assess such bias. Generally, they also have not cautioned the reader about the questionable validity of the findings. A preferred approach would be to use smaller probability or purposive employer samples coupled with more intensive follow-through procedures to maximize return rates.

The question of what the data mean must still be addressed, regardless of response rate. The relative value and meaning of the data are determined to a great extent by the organizational role of the individual who fills out the questionnaire. Top level company executives, personnel directors, and others may well delegate the task of filling out questionnaires to persons not qualified to respond. Some questionnaires, in fact, have asked questions that chief executives would not really be able to answer accurately. One such study (Vocational Education in Alabama, 1976), on an item asking the employer to compare vocational with nonvocational graduates, included "have no objective basis for comparing" and "don't know" as possible responses. Sixty-one percent of the respondents elected one of these two responses. Such a finding calls into question the number of other studies which asked for comparisons between vocational and nonvocational students but did not provide a "don't know" response option. A related difficulty is the fact that in general surveys of employers, many persons who are relatively unfamiliar with vocational education and, in fact, might have difficulty differentiating vocational from nonvocational graduates within the employing organization, are rating former

vocational students and their training. Employers have almost universally responded that they do not know very much about vocational education and would like to know more about vocational programs.

When data are sought from persons other than immediate supervisors or others qualified to observe particular employees, survey questions should not require knowledge based on direct observation. Otherwise, employers might be forced to respond to questions they are not qualified to answer or they might fail to respond altogether. This factor may account for the serious nonresponse problem in general employer surveys. In contrast to the situation with general employer surveys, response rates from immediate supervisors asked to rate specific former vocational students are typically 70 to 80 percent.

The terms used and the format of questions asked should be easily understood by the employer. Some of the employer questionnaires reviewed here contained items which would be difficult to answer because of their wording. A fairly common problem has been the provision of response alternatives which do not appear to be at equal intervals and the mixing of what appear to be "criterion" and "norm" referenced options. An example of the latter was an item which asked employers to rate vocational graduates on a number of characteristics on the scale of "not adequate," "barely adequate," "adequate," "above average," and "superior." Adequacy is a criterion-related assessment but above average and superior are normative. Such questions can be confusing to employers and can reduce response rate and data reliability.

Such methodological problems contribute to the overall concern for the usability of employer data. If employer perceptions of, or attitudes toward, the vocational education system are being assessed rather than appraisals of performance by persons in a position to make such appraisals, such data do not provide reliable input for program change. In terms of data input for program planning, such surveys raise questions as to the extent to which program developers must attend to both student and employer needs. The questionable quality of many employer surveys raises the further issue of whether employer satisfaction can be assessed more accurately by other than survey research methods. These and other questions need to be addressed by the vocational education research community before widespread adoption of current findings to make program changes, to develop better guidance services, and to evaluate programs.

Employer feedback data do have the potential of assisting planners in modifying programs, developing better guidance services, and providing information for program assessment and other uses. Presently, however, the available data should not be the sole source of such information. It was suggested earlier that the

further removed the data source is from supervision of the former vocational student, the more the data are apt to be perceptual or attitudinal. Such data may be more useful in providing guidance to communication or public relations efforts.

Conversely, data which are carefully collected from persons who are qualified to respond appear to be a rich source of evaluation information which is presently not used to its best advantage. Many local and state level vocational follow-up systems have employer follow-up components which can and do supply useful and relatively accurate data.

Identification of Vocational Education Students

What constitutes a vocational education student must be clearly defined in order for data on employer satisfaction to be of any real value to the vocational education system. For the most part, problems of student identification relate to the levels at which vocational education is offered, the delivery systems for vocational education, and problems in defining graduates, completers, and leavers.

Level of Vocational Education

Vocational education takes place at three levels: secondary, postsecondary, and adult or continuing education. A graduate's characteristics as an employee may be related to the level of vocational education completed, in that, for example, a postsecondary graduate may be older and more mature than a high school graduate. A graduate's age, prior work experience, concurrent work experience, and clarity of career goals, are all factors which influence an employer's opinion. Characteristics such as these should be accounted for in the construction, collection, analysis, and interpretation of data. Considerable care must be exercised if comparisons across or among levels are made.

The secondary education graduate will generally exit from a federally reimbursed program which (a) will usually be at least one year in length, (b) will probably be offered only to eleventh and twelfth graders, (c) will probably be located in a public comprehensive high school or area vocational school, and (d) will usually be oriented toward the average high school student. These characteristics should not be viewed as absolutes. For example, certain programs, such as industrial arts classes, may not be federally reimbursed. Some programs, such as welding, may be a few weeks of intensive instruction while others, like vocational agriculture and distributive education, may be four years in length. Certain programs may be located in approved private secondary schools. Other programs may be oriented toward the

socioeconomically or academically disadvantaged, or handicapped students.

The postsecondary education graduate will generally exit from a program with a smaller proportion of federal reimbursement. The program will usually be a one-year certification or a two-year associate degree program for high school graduates in a community or junior college or technical institute. These features should also be viewed with caution. For example, federal reimbursement can vary greatly. The program may be less than a one-year certification program such as an intensive typing block program, or it may be longer than two years, as in certain licensure health occupations programs. The program may be located in a college or university providing associate degrees and may be designed for part-time students or high school dropouts.

The adult or continuing education graduate may exit from either the secondary or postsecondary level. The graduate will likely have been employed part time while attending school and will most likely be older than high school level or postsecondary vocational graduates. Once again, characteristics of these students vary.

Delivery Systems

Since there are several delivery systems for vocational education, some confusion on the part of the employers surveyed and those interpreting results may be expected. Delivery systems include public schools, proprietary schools, on-the-job training programs, military programs, apprenticeship programs, and programs sponsored by the U.S. Department of Labor. Researchers and consumers of research must be able to delineate the differences between delivery systems before appropriate research designs and interpretations may be made.

For the most part, vocational education is regarded as a federally funded program within the public schools. The public school delivery system is oriented toward in-school youth. The proprietary schools cater to high school graduates with a defined career goal and, consequently use a specialized curricular approach. On-the-job training programs provide specific training to their own employees in an effort to orient, upgrade, or retrain existing personnel. Military programs train recruits for advancement through training of selected workers and are job and clock-hour based. The U.S. Department of Labor programs usually involve short-term intensive skill development with some form of paid employment.

The differences in the students and curricular approaches across the various delivery systems make comparisons difficult.

Research on employer satisfaction should be designed, conducted, and analyzed with these differences in mind.

Graduates, Completers, and Leavers

The most common definition of graduate specifies that the student must possess the requisite diploma, certificate, or degree signifying completion of the program. This criterion does not account for the extent of education or the level of competence attained. For example, a student may take one semester of vocational courses and meet high school diploma requirements. Another student may enroll and attend two years of vocational education classes, not pass competency tests, but meet all high school diploma requirements. A third type of student, usually at the postsecondary level, takes a job without a degree once the vocational education requirements are met. Students leave educational programs for a variety of reasons. School leavers may or may not have had any vocational education. Surveys of employers of vocational graduates will always encounter problems of definition unless efforts are made to define uniformly the population of students under consideration.

Identification of Employers

The researcher concerned with assessing employer satisfaction with vocational education graduates will probably experience some difficulty in determining who is an employer. The literature suggests three categories of problems including (a) determining the functional level of the employers, (b) properly treating those who are self-employed, and (c) addressing problems associated with changes in employer.

Functional Level

The satisfaction expressed by employers will depend upon the amount of contact with and responsibility for the employee. The line supervisor's ratings will vary from the personnel director's ratings and from the central administration's ratings. One study (Snyder, 1972) found considerable variance between the supervisor's and the personnel director's ratings of the former vocational students. It may be reasoned that most of the variance is due to the amount of information available and the perspective of the rater. Nevertheless, the differences should be taken into account in any research effort.

Self-employed

Many vocational education graduates are self-employed. A self-employed graduate should be construed as both an employee and employer respondent, although there does not appear to be any recognition of the self-employed in present employer satisfaction research.

Job and Employer Changes

In follow-up surveys, the most common procedure is to request that the former student identify his or her employer. Under new laws designed to protect an individual's right to privacy, many follow-up surveys are now requesting permission to contact the identified employer and are requesting that the former student sign and date a data release form. Such a form normally states who is to have access to what data for what purpose.

Several circumstances may tend to bias employer data as these processes are carried out. Former students who feel they are doing well on the job may be more willing to grant permission to contact employers than others. A student may have had more than one employer since leaving the vocational program but have only one listed for contact by the follow-up system. A third circumstance involves the supervisor's change of position or firm. This will generally result in no response or in information supplied by a substitute respondent. Either of these circumstances results in information being supplied by personnel with different levels of exposure to the former student.

IMPLIED BENEFITS OF INFORMATION ON EMPLOYER SATISFACTION

A cursory review of general consumer satisfaction studies prompts several observations. For example, it appears that the assumptions on which consumer satisfaction research is based may be subject to criticism. Furthermore, the uses of information on consumer satisfaction should go beyond the assessment of product value and product improvement. Finally, the design, methodology, and interpretation of consumer satisfaction research data are subject to bias. The relationship of these observations to research on employer satisfaction with vocational education graduates may be strong.

The reasons for assessing employer satisfaction with vocational education graduates are similar to the reasons for collecting consumer satisfaction information. The reasons for assessing employer satisfaction with vocational education graduates include the following: (a) to validate worth, (b) to identify needed

improvements, (c) to improve education/employer relations, (d) to improve student guidance services, (e) to bolster recruitment, (f) to enhance labor force capability, and (g) to satisfy legislative mandates. The following sections are provided as potential benefits of employer satisfaction studies. The limited data base in this area did not explicitly identify these groups. Rather, such benefits may be assumed from the studies reviewed.

Validate Worth

The basic decision of whether to continue or discontinue a vocational program revolves around the worth of that program. The recent interest in accountability has created additional pressure to describe the worth of vocational education. These factors, together with adminstrative needs to set priorities for program offerings, emphasize the importance of specifying the worth of vocational programs. Thus, employer satisfaction information related to program worth may be collected to provide information for accountability and decision making.

A review of items from employer surveys suggests potential indicators of worth. Generally these items sought information from employers regarding whether or not (a) the employer has hired vocational graduates, (b) the employer would hire more vocational graduates, (c) the employer thought the graduates were prepared for employment, and (d) the employer thought the graduates had potential for advancement.

Identify Needed Improvements

Vocational education programs are in constant need of revision. The optimal source of information to determine new priorities for instruction is the work setting. Thus, employer opinion can be an efficient means of effecting program improvement. Most items used in employer surveys tend to produce broad and generalized data about program improvement.

Surveys of employer opinions have been conducted to identify entry level competencies, priorities of occupational tasks, and characteristics of facilities, and to specify desired affective behavior on the part of workers. These studies have most often been conducted by local and state education agencies. The Vocational Technical Education Consortium of States (V-TECS, 1979) materials are the most notable examples of extensive employer surveys designed to identify occupational competencies. Researchers at the National Center for Research in Vocational Education have also been involved in surveying employers to identify task inventories in various occupations.

Improve Relations Between Vocational Education and Employers

The vocational education community and business and industry are mutually dependent. Business and industry needs a reliable source of trained personnel and a forum for the exchange of ideas. Vocational education needs a marketplace for its graduates, training sites for its student, and a practical base from which new and revised technology may be identified. Research related to the assessment of employer satisfaction with vocational graduates can serve as a vehicle for improved relations between vocational educators and employers. Improved relations should produce better vocational curricula and a more productive labor force.

Few employer surveys have included items concerning the relationship between education and industry. Some studies, however, have identified the fact that employers wish to improve the liaison between the education and work communities (Francis and Jones, 1976). In addition, O'Reilly and Asche found that employers were more responsive to follow-up studies than former students (1979), as indicated by their high median return rate on questionnaires. The high response rate for follow-up studies may indicate the desire on the part of employers to establish and maintain working relationships with education.

Improve Guidance Services

Vocational guidance and counseling services often have employment functions. The functions include guidance into an occupational program, providing information about occupational alternatives within career clusters, counseling regarding study priorities, placement for job orientation and exploration, and actual job placement. While many vocational counselors have work experience, many do not. None have experience in all occupational areas. The effectiveness of counselors can be improved with additional information from employers. Hence, counselors can potentially benefit from surveys of employers. Certain items on such surveys, though intended for other purposes, can assist the vocational guidance and counseling function. Information on (a) requisite knowledge, skills, and attitudes, (b) salary and benefits, (c) opportunity for advancement, (d) characteristics of jobs, (e) characteristics of currently employed personnel by jobs, and (f) contact personnel in the work setting can be very useful to vocational counselors.

Bolster Recruitment

Recruitment of a sufficient number of appropriate students can pose problems for many vocational education programs. The added

cost of vocational education is increased when programs have low enrollments and high attrition rates. These problems could be alleviated if more students were interested in vocational education and if students had a better understanding of the vocational program in which they enroll. Employer input could provide the information necessary to insure appropriate recruitment approaches.

Vocational education traditionally has been evaluated in terms of the number of graduates it produces who enter jobs for which they were trained. A successful vocational program provides a sufficient number of students entering and staying in the occupations for which they were trained. To promote this goal, employer surveys can be used to shape programs designed to recruit students.

Enhance Labor Force Capability

A long-term goal of vocational education has been to meet the manpower needs of the nation. The needs have been construed to mean a sufficient quantity and quality of trained persons for the labor force. An equally important goal is to provide a labor force capable of adapting to new technology and of contributing to the development of new technology. The importance of developing an educated work force should not be taken lightly. While it would be naive to think that employer satisfaction research could prevent or cure productivity problems, it is reasonable to think that such research could be beneficial.

Satisfy Legislative Mandates

Federal and state laws require various forms of follow-up and evaluation. These requirements may be viewed as reporting and compliance requirements. Much of the information available on employer satisfaction has evolved from efforts to meet these requirements. Without the incentive of legislation, much less information would have been collected on employer opinions.

Various studies have expressed the fact that their main purpose is meeting legal reporting and compliance requirements. The legislative mandate is clear regarding federally supported vocational education. Title II of the Education Amendments of 1976 (P.L. 94-482) specifically requires the collection of data on employer satisfaction with vocational graduates. Section 112 (B) of the Education Amendments of 1976 states:

> Each State shall evaluate, by using data collected, wherever possible, by statistically valid sampling techniques, each such program within the State which purports to impart entry

level job skills according to the extent to which program completers and leavers--"(i) find employment in occupations related to their training, and (ii) are considered by their employers to be well-trained and prepared for employment." (Sec. 112 (b)(1)(B))

The continuation of this mandate with its system for collection of information on employer satisfaction should produce good comparative data. The collection system requires a network of collection organizations. In a real sense the organizations will be the primary generators and users of data collected. The network relationships, responsibilities, and authorities remain unsettled. However, the key institutional network elements include the National Advisory Council on Vocational Education, State Advisory Councils on Vocational Education, Local Advisory Councils on Vocational Education, The National Occupational Information Coordinating Committee (NOICC), State Occupational Information Coordinating Committees (SOICCs), State Plan and Accountability Reporting Committees (SPARCs), the Vocational Education Data System (VEDS), and State Vocational Education Management Information Systems.

PROPOSED POLICY AND RESEARCH POSITIONS

The state of the art of assessing employer satisfaction with education graduates is still uncertain. There are many potential benefits which may be derived from research on employer satisfaction. There are also several models for considering satisfaction and attitude which have been developed in related fields and which could be modified for use in vocational education survey research. Little methodological research has been done on employer opinions and, therefore, the area should be amenable to innovation and change. On the other hand, the negative aspects include the fact that there are several unresolved problems of definition and philosophy. Furthermore, no clear evidence exists that there is a unified approach to research on employer opinions. Some evidence shows that appropriate research methodologies have been violated, and there is some indication that inappropriate interpretations have been made from existing studies.

Based on these observations, several policy statements are in order. The need for these statements may be derived from the legislative mandate to collect information on employer satisfaction. These policy statements include:

1. Research should be conducted to address philosophical issues related to the collection of information about employer satisfaction with vocational education.

2. Studies should be conducted to compare and adapt approaches to employer feedback research to vocational education.

3. Common definitions of terms related to employer satisfaction with vocational education should be developed.

4. Improved research practices in the employer satisfaction area should be widely disseminated.

5. While employer feedback may make an important contribution, philosophical as well as methodological considerations mandate that both formative and summative evaluation of vocational education programs be based on multiple data sources.

The present authors have not provided any certain answers to the questions they have identified. There is no simple answer to the question of how satisfied employers are with the work of vocational educators and the vocational education delivery system. To the extent that the present literature permits summary, results are generally favorable. Future research using more systematic and sophisticated methods is needed to provide information which has greater reliability and demonstrated validity.

APPENDIX

Abstracts of Studies

Each of the identified documents were reviewed by examining the study objectives, methodology, and findings. A brief abstract is provided on the studies selected. Many documents were so extensive as to make a complete summary of findings difficult. In such cases, only the objectives, methods, and findings related to employer data were summarized. The abstracts are organized under two categories: (a) general employer surveys, and (b) employer follow-up studies.

General Employer Surveys

Under this classification are included studies which sought information on vocational education or its products from employers selected on some basis other than prior knowledge that they had hired former vocational students. Most of these studies involved a mailed or sample survey to personnel officers or executives of companies in a state or geographic area. Such studies asked for general information concerning vocational education or its graduates. Most showed low response rates.

- The Adequacy of Vocational and Technical Education. Columbia, SC: South Carolina Advisory Council on Vocational and Technical Education, 1976.

  Objectives. The study was undertaken to obtain data which would assist the council in its responsibility to evaluate the effectiveness of vocational education programs, services, and activities. Five basic areas of inquiry are listed below in the discussion of findings.

  Methodology. A questionnaire was mailed to the 10,000 largest employers in the state. From this number, 1,161 usable responses were received for a response rate of 11.6 percent. No follow-up of nonrespondents was conducted and no attempt to check for or assess nonrespondent bias was attempted.

  Findings. The major research question related to whether vocational education is a good source of trained manpower. More than 90 percent of the respondents answered yes. On the question concerning the extent to which the system was meeting the needs of business and industry in terms of postsecondary education, 9 percent responded "to a very great extent," 32 percent responded "to somewhat of an extent"; in terms of

secondary education, 4 percent responded "to a very great extent," 21 percent responded "to a great extent," and 34 percent responded "to somewhat of an extent." On the question concerning how well vocational graduates compare to other workers, in terms of postsecondary graduates, 12 percent responded "extremely capable"; 62 percent, "very capable"; 20 percent, "somewhat capable"; and 1 percent, "not as capable." On the secondary level, the responses were: 6 percent, "extremely capable"; 49 percent, "very capable"; 29 percent, "somewhat capable"; and 3 percent, "not capable."

- Divita, C. Attitudes Toward Vocational Education in the Secondary Schools of West Virginia Part II: Employers and Labor Leaders. Huntington, WV: West Virginia Research Coordinating Unit for Vocational Education, 1971. ED 050 285

  Although the authors regarded the findings of this study to be out of date, they noted that it was the only one to assess the perceptions of labor leaders as well as employers.

- Eighth Annual Evaluation Report. Olympia, WA: Washington State Advisory Council on Vocational Education, 1977.

  Objectives. A survey of employer perceptions of vocational education is included as part of the overall evaluation report. The study was designed to gather information concerning employer's attitudes toward, and opinions of, the vocational education program in the state.

  Methodology. A questionnaire composed of six types of items (attitudes, attributes, employer ratings, success measures, open-ended questions, and employer classification) was mailed to 869 employers. The response rate was 55.9 percent. A descriptive summary of respondent characteristics was provided. No description of the method of selecting the 869 employers was provided in the summary.

  Findings. Highlights drawn from the data were provided in the report. Selected findings included the fact that 85 percent of the respondents agreed that vocational education students should have more practical experience in their training. In addition, 83 percent felt there should be more contact between employers and educators. Eighty-two percent said vocational education needs to have an improved image, although 88 percent remarked, "I am thoroughly sold on offering vocational education in high school." Another 76 percent commented, "I would like to know more about the state's vocational education

programs." Sixty-two percent of the respondents indicated that they had "no opinion" as to whether the program in vocational education was satisfactory.

Employers were asked to rank six proposed measures of success and the highest rank was received by the statement, "The rate at which graduates advance to more responsible positions within their chosen occupation." Ranked last was, "The amount of student satisfaction with the training program."

- Missouri Advisory Council on Vocational Education. MOVE in 77, Eighth Annual Report. Jefferson City, MO: Missouri Advisory Council on Vocational Education, 1977.

  Objectives. The Governor's Conference on Education contracted a study on Missouri employers' perceptions of the state's vocational education system. A review of that study is included in the Eighth Annual Report of the Council. The following is abstracted from that review. No specific objectives were stated.

  Methodology. A questionnaire was mailed to 800 Missouri firms with more than 100 employees. The 800 were selected by a random sample stratified from the Missouri Occupational Training Information System (MOTIS) regions and the Standard Industrial Classification (SIC) groups. The survey follow-up included telephone calls and personal interviews. The return rate was 31 percent, or 251 responses.

  Findings. Findings were broken out in terms of questions posed. Sixteen percent reported they had not hired any vocational graduates. Nearly 75 percent reported hiring graduates for jobs not specifically related to their training. Employers indicated that the graduates were better qualified for the position as a result of their vocational training, particularly in terms of job interview skills, career direction, and motivation. Thirty-one percent indicated that they had not been contacted by either secondary or postsecondary school personnel. More than 75 percent indicated that secondary level vocational graduates were more capable than nonvocational graduates. On the postsecondary level, 85 percent of the respondents rated vocational education graduates as superior to nonvocational graduates. Most respondents felt vocational education was meeting the occupational training needs of students. Interview data indicated that both vocational and nonvocational graduates were receiving inadequate training in reading, writing, and math skills. A high percentage of those interviewed felt the cooperative programs were particularly effective in meeting student needs.

- Sawyers, B. A. The Public's Perception of Secondary Vocational Education in Indiana. Bloomington, IN: University of Indiana, 1977. ED 151 608

  Objectives. No specific objectives were identified.

  Methodology. From among a sample of 399 persons, 60 employers were interviewed by telephone. The same questions were used to survey parents, teachers, junior and senior high school students, counselors, and school administrators in the state. Sixty-two statements were read and respondents were asked to reply "agree," "uncertain," "disagree," "don't know," or "no opinion." Comparisons were made between each of the respondent groups.

  Findings. Actual item means and standard deviations for the groups were not reported. Correlational data were reported but insufficient information was provided for interpretation. Scaling of responses also was not reported. For these reasons, the findings are not summarized in this report.

- Seventh Annual Evaluation Report. San Juan, PR: Advisory Council for Vocational, Technical and Higher Skills Education, 1976.

  Objectives. This study was designed to evaluate three areas: (1) curriculum material development; (2) the area vocational school concept; and (3) student training in industry, called "third phase." The evaluation of the third phase program included an employer survey.

  Methodology. For the third phase evaluation, a stratified sample of 190 employers was drawn from a universe of 571, based on percentages of employers in each of six regions. A mailing and a follow-up letter produced a response rate of 45 percent.

  Findings. The conclusions were that those employers who responded have a high regard for the vocational students participating in the third phase program; that the program is satisfying the demand for trained personnel; and that the vocational program is rated as highly satisfactory. Employers also indicated that students need better guidance and counseling services, instruction must be updated to meet industrial demand, and communication between school personnel, students, and employers needs to be strengthened. Fourteen percent of the employers indicated that students need more training.

- Simpson, R. B. Are Employer Needs Being Met? Vocational Education - Employer Needs Survey. Salt Lake City, UT: Utah State Advisory Council for Vocational and Technical Education, 1977.

  Objectives. The study focused on answering four basic research questions: (1) How well are vocational education institutions meeting Utah employers' needs for trained people? (2) What do Utah's employers want from the vocational education system? (3) How familiar are Utah's employers with vocational education institutions, programs, and graduates' skills? and (4) What are Utah's employers willing to do to assist vocational educators in better preparing students for employment?

  Methodology. Questionnaires (N=989) were mailed to a representative sample of the state's employers. Three hundred one firms responded, for a response rate of 30 percent.

  Findings. Among those who responded, 50 percent had not hired former students of either the secondary or postsecondary vocational education system. When asked how they would rate current employees with vocational training as to quality of work and job skills as compared to those without vocational training, 38 percent of employers responded "above average." Twenty-nine percent of the respondents rated the training of employees who had completed a high school level vocational program as adequate.

  Other findings indicated a relative lack of familiarity with vocational programs. None of the industry groups listed vocational schools as a primary source for recruiting employees.

- Talarzyk, W. W. Perceptions of Vocational Education in Ohio by Employers. Columbus, OH: Educational Marketing Association for the Ohio Advisory Council on Vocational Education, 1975.

  Objectives. This study was designed to gather information concerning employer's attitudes toward Ohio's vocational education program.

  Methodology. A questionnaire was mailed to 1,000 randomly selected employers with 15 or more employees. Questionnaires were sent to personnel departments and 251 employers responded, for a return rate of 25 percent. Characteristics of the respondent group were summarized.

Employers were asked about their attitudes toward both general and vocational education; their ranking of employee attributes; their ratings of the attributes of vocational and non-vocational graduates; and their opinions on the strengths and weaknesses of vocational education. Additional questions related to size of firm, percentage of employees who are vocational graduates, and types of employees hired.

Findings. Vocational graduates received the highest ratings on all worker attributes except responsibility and ability to work with others. Comparisons were made according to percentage of employees who are vocational education graduates, size of firm, and users of graduates of various vocational service areas. Those who did not employ vocational graduates tended to have more negative perceptions of vocational education. This was also true of smaller firms (less than 75 employees).

- Virginia Employers View Vocational Education. Blacksburg, VA: Virginia State Advisory Council on Vocational Education, 1977.

Objectives. Information was sought in twelve categories, including degree of employer familiarity with vocational education, evaluation of high schools and community colleges as sources of trained manpower, ratings of vocational graduates, extent of involvement with vocational education programs, and suggestions for providers of vocational education, among other categories.

Methodology. A mailed questionnaire was sent to a sample of 20,000 from among the 65,000 listed employers in Virginia. Usable responses were received from 2,500, for a response rate of 12.5 percent.

Findings. Selected findings highlighted in the study report were:

1. Seventy percent of the respondents indicated that they had a high degree of familiarity with vocational education.

2. Most indicated that high schools and community colleges are good sources of trained manpower but 45 percent had not hired vocational education graduates during the past two years.

3. Forty-six percent of the vocational graduates were hired in low skilled positions such as laborers, operatives, and service workers.

4. In general, as the degree of skill for the job increased, the average number of vocational graduates hired decreased.

5. Respondents were more likely to consider vocational education important for proper job performance as the degree of skill required for the job increased.

6. The actual hiring practices of respondents imply certain dissatisfaction with vocational education graduates' abilities and experiences.

- Vocational Education in Alabama: A Survey of the Opinions of Business and Industry. Auburn, AL: Alabama Advisory Council on Vocational Education, 1976.

  Objectives. This study was intended to ascertain the views of business and industry toward vocational education in Alabama.

  Methodology. A questionnaire was mailed to a sample of 24,000 firms, approximately 50 percent of the firms in the state. Usable returns were received from 1,883, for a response rate of 7.8 percent.

  Findings. The following are percentages of respondents who were either very familiar or somewhat familiar with each of the following programs: vocational programs in local high schools, 55 percent; area vocational centers, 43 percent; technical colleges or institutes, 56 percent; colleges, 44 percent; industrial development training, 25 percent; vocational adult evening classes, 35 percent; and apprenticeship programs, 22 percent. Respondents cited vocational training as being most important for jobs other than unskilled laborers and service workers. When asked to compare vocational graduates with other workers, 21 percent indicated that vocational graduates were better. Fifty-seven percent of the respondents indicated that they had had no involvement with vocational education through service on advisory councils, provision of work stations, and so on. Fifty-three percent of the respondents indicated a preference for better vocational counseling; 52 percent, a broader vocational program in high schools; 50 percent, better cooperation between business and industry and the schools; and 41 percent a systematic follow-up of vocational graduates.

Employer Follow-up Studies

The following are abstracts of follow-up studies of former vocational students. The general approach involves asking employers questions about specific former students and about vocational graduates generally. In both cases, employers are identified on the basis of the fact that they have hired former vocational students.

- Baratta, M. K. Employer Evaluation of 1975-1976 Occupational Graduates. Palos Hill, IL: Moraine Valley Community College, 1977. ED 156 234

  Objectives. The study was designed to provide the college with feedback from employers of occupational graduates.

  Methodology. Employers (N=131) identified by 1975-1976 graduates of business, health science, technological, and public service programs were surveyed by mailed questionnaire. The response rate was 92 percent.

  Findings. Supervisors rated vocational graduates in six major areas: human relations skills, communication skills, technical skills, problem-solving skills, life skills, and general skills, including work quality, work quantity, and work attitudes. The means for the subgroups under these major areas showed that supervisors rated the vocational graduates as good to excellent in all categories.

- Breen, E. F., and Freeman, N. An Appraisal of the Industrial Cooperative Education Program Based on the Responses from Students and Employers. Warren, MI: Macomb County Community College, 1977. ED 161 493

  Objectives. The intent of this study was to appraise the Macomb County Community College Industrial Cooperative Education Program. Eleven specific research questions were stated, three of which were related to employer ratings of the industrial co-op program and its graduates.

  Methodology. Students who participated in either the design technology or mechanical technology programs at the college during 1970-1975 (N=481) and a random sample of non co-op technology students from the same time period (N=731) were mailed survey instruments. The employer sample consisted of 83 companies which had participated in the cooperative

programs. Student and employer return rates were 51 percent and 54 percent respectively.

Findings. Employer ratings of technical preparation of former design technology cooperative students were as follows: 41 percent, excellent; 45 percent, adequate; 10 percent, fair. Employer ratings of the technical preparation of former mechanical technology students were as follows: 47 percent, excellent; 42 percent, adequate; and 11 percent, fair. Ratings of the technical preparation of noncooperative students from design technology were: 24 percent, excellent; 56 percent, adequate; and 20 percent, fair. For former mechanical technology students who were not on the cooperative plan, the ratings were: 45 percent, excellent; 50 percent, adequate. Narrative comments on the strengths and weaknesses of the industrial cooperative program appear in the report.

- Clark, D. E. Follow-Up of Maple Woods Community College Occupational Graduates 1970-1974. Kansas City, MO: Maple Woods Community College, 1975. ED 116 753

  Objectives. This study was designed as a follow-up of graduates of aviation maintenance, electronics technology, secretarial science, business administration, and administration of justice.

  Methodology. A questionnaire was sent to the total population of 214 graduates. The response rate was 66 percent. A questionnaire sent to employers of responding graduates yielded a response rate of 82 percent.

  Findings. Forty-seven percent of the employers surveyed rated the graduates' degree of preparation for the job as "good," while 37 percent rated it "excellent." Eighty-two percent rated the skill level of graduates "excellent" or "good." Fifty-four percent rated graduates' attitude toward work as excellent.

- Employer Follow-up Data Summary - 1976-1977. TEX-SIS Follow-Up: Postsecondary Student Follow-Up Management Information System, Monograph 8. Austin, TX: Texas Education Agency, 1978. ED 156 241

  Objectives. A major objective of this study was to survey employers concerning their attitudes toward graduates of postsecondary vocational education.

Methodology. Three hundred fifty-seven employers of graduates of four Texas postsecondary institutions rated individual graduates on personal and technical skills and overall training. A mailed questionnaire was used. Response rate was 74 percent.

Findings. Employers rated graduates on a five point rating scale from one (very poor) to five (very good). On the ten areas of personal skills rated by employers, the average ratings were "good." On the eleven technical areas, average ratings were also "good." In the overall rating of training, 84 percent of the employers rated graduates as "very good" or "good."

- Employers and Young Adults Look at Vocational Education. Columbus, OH: Ohio State Advisory Council on Vocational Education, 1973.

Objectives. The intent of this study was to survey vocational graduates and employers of both vocational and nonvocational graduates to discern the comparative worker characteristics of vocational and nonvocational employees.

Methodology. This study is included because of its comprehensiveness and unique methodology. Researchers interviewed 511 young adults and their employers. The young adult sample consisted of matched groups of 254 graduates of approved reimbursed vocational education programs and 257 high school graduates of other programs. The employers were the immediate supervisors of the 511 graduates. A complex sampling design was used to select the young adults of two age ranges (19-20 and 25-26). Employers were the immediate supervisors identified by graduates during interviews. Each employer was asked to rate entry level skill and twenty other worker skills and characteristics.

Findings. Vocational graduates were rated significantly higher than other graduates on entry level skills and on technical knowledge at entry. From among the twenty worker characteristics listed, vocational graduates were rated significantly higher on willingness to learn new job skills or take additional training, ability to follow suggestions, work habits, promotability, attitudes toward company or employer, concern for productivity, and concern for safety. Nonvocational graduates were not rated significantly higher in any of the areas.

Two thirds of the employers were satisfied with employees' high school preparation. The 30 percent who stated that vocational graduates could have had more training were primarily concerned with math, English and spelling, public speaking, and ability to assume responsibility. Nonvocational graduates were rated similarly in those areas.

- Enoch, L. W. A Follow-Up of Former Vocational Students from the Roanoke City Public Schools, 1975-1976. Roanoke, VA: Roanoke City Schools, 1977. ED 143 879

  Objectives. One objective of the study was to determine employers' degree of satisfaction with former vocational education students from Roanoke city schools.

  Methodology. All completers (381) of the direct entry vocational program during the 1975-1976 school year were surveyed by mail questionnaire. Employers of responding students working in training-related occupations were also surveyed by means of a mail questionnaire. Response rate for students was 51 percent (195); for employers, the response rate was 75 percent.

  Findings. Fifty-three percent of the employers gave graduates an overall rating of "good;" 25 percent gave an overall rating of "excellent." Employers were asked to rate graduates on twelve specific skill areas and worker characteristics. Excellent ratings ranged from 18 percent to 50 percent; good ratings ranged from 21 percent to 63 percent; fair from 5 percent to 34 percent; and poor from 3 percent to 5 percent.

- Gell, R. L., and Jones, R. F. The Employers III: A Survey of Employers Who Have Hired Career Program Graduates of Montgomery Community College. Rockville, MD: Montgomery Community College, Office of Institutional Research, 1976. ED 128 050

  Objectives. This study surveyed the 1975 graduates of Montgomery Community College. Seventy-one percent of the employed respondents gave permission to contact their employers. The study attempted to elicit views in three areas: (1) the value of an associate degree, (2) an evaluation of the preparation of Montgomery Community College graduates, and (3) suggestions for improvement.

Methodology. Graduates identified their employers. A mail questionnaire sent to employers yielded a 65 percent response rate.

Findings. Thirty-seven percent of the responding employees expressed a preference for the associate degree, while 50 percent of the employers neither required nor preferred the degree. Thirteen percent indicated the degree was a requirement for job entry. Fifty percent indicated that possession of the associate degree would improve chances for promotion. Preparation of the graduates was rated as more than adequate by 69 percent and adequate by 29 percent of the employers. Graduates were rated highest on ability to communicate, ability to get along with coworkers, and overall attitude. When asked if they would hire graduates with the same degree, 45 percent answered "yes, without reservation" and 48 percent answered "yes, with careful screening."

- Hamby, J. A Comparison Study of the Benefits of Secondary and Postsecondary Vocational Education. Helena, MT: Office of Public Instruction, 1978. ED 156 909

Objectives. The study was designed to determine whether money spent on vocational training produces benefits for the recipients. One of the three major foci was on employers' perceptions of training.

Methodology. A stratified random sample design yielded a study sample of 857 Montana high school graduates from 1970 and 1971, 23-25 years of age, and employed in the state during at least two years following graduation. The sample was classified according to three groups: (1) postsecondary vocational, (2) secondary vocational, and (3) academic/general. Graduates were surveyed by telephone and mail, while employers were surveyed by mail only. Eighty-five employers were selected on the basis of size of firm. Thirty-six returned questionnaires for a return rate of 42 percent.

Findings. Although the modest return rate prevented generalization to a larger population, study findings were quite positive. The mean rating of the quality of postsecondary vocational programs was 74 out of 100; secondary, 55 out of 100; and academic general, 48 out of 100. When asked to compare the three groups on motivation, job commitment, information, and commitment to work ethic, employers expressed high levels of preference for postsecondary vocational graduates.

- Harris, R. C., and Hodgson, C. A. Assessment of Cooperative Education by Former Students and Participating Employers. Paper presented at AVA convention, New Orleans, LA: 1974.

  Objectives. This study was designed to evaluate cooperative vocational education, particularly interdisciplinary cooperative education.

  Methodology. Programs in fifty-four rural and suburban schools were included in the sample. A follow-up questionnaire was mailed to 1,032 graduates of the program approximately one year after graduation. The response rate was 59 percent, with 610 questionnaires returned. A sample of 677 participating employers had been surveyed by mail questionnaires approximately one year earlier when the students were still in the cooperative program. The employer response rate was 76 percent.

  Findings. Cooperating employers were asked to rate the nature of a letter of recommendation they might write for the employee. Results indicated 16 percent would write an exceptionally favorable letter; 29 percent, a very favorable letter; 34 percent, a favorable letter; 16 percent, a cautiously favorable letter; and 3 percent, an unfavorable letter.

  Ratings of students' entering skill levels were 53 percent, fairly skilled; 26 percent, highly skilled, and 5 percent, exceptionally skilled. When asked if the training program was effective, 500 of 514 responding employers answered "yes."

- McLean, G. N. Effectiveness of Model Office, Cooperative Office Education and Office Procedures Course Based on Employee Satisfaction and Satisfactoriness Eighteen Months After Graduation. Minneapolis, MN: University of Minnesota, 1975. ED 114 548

  Objectives. The study was intended to determine if graduates' overall satisfaction and satisfactoriness was affected by the type of business education course completed, socioeconomic status of students, and interaction of program and socioeconomic status.

  Methodology. Graduates of the three programs (712 total) were surveyed by means of a personal data questionnaire, a data release form, and the Minnesota Satisfaction Questionnaire (MSQ). When graduates granted permission, their employers were asked to complete the Minnesota Satisfactoriness Scales (MSS). Sixteen to 22 percent of the graduates did not give

permission to contact their employer, but the response rate from employers contacted was 96 percent.

Findings. No differences in the overall satisfactoriness or any of the subscales were found related to program completed, socioeconomic status, or interaction of program and socio-economic status.

- Morton, J. B.; Christensen, H; and Hatfield, G. Student and Employer Evaluation. Stillwater, OK: State Department of Vocational and Technical Education, Division of Research, Planning and Evaluation, 1977. ED 142 791

  Objectives. The study was intended to elicit employers' evaluation of secondary level students' quality and quantity of work, and the skills and abilities within the occupation.

  Methodology. A sample of 1,215 former students was drawn from 15,676 total graduates. Mail questionnaires were sent to the sample. One hundred six employers of those respondents working full time in the occupation for which they were trained (or a related occupation) were surveyed. Responses were received from sixty-nine employers for a response rate of 65 percent.

  Findings. Results showed that the majority of employers rated the graduates average or above average on the following items: quality of work, quantity of work, willingness to accept responsibility, ability to work without supervision, willingness to learn and improve, and several other items. In terms of the overall rating, 37 percent of employers rated the graduates as excellent, 41 percent as good, and 15 percent as average.

  Ninety-two percent indicated they were satisfied with the employee's vocational training.

- Preston, J. Vocational-Technical and Adult Education 1974 Student and Employer Follow-Up Surveys in Sarasota County, Florida. Sarasota, FL: County Board of Public Instruction, 1975. ED 121 997

  Objectives. Objectives were not stated in the report, although the intent appeared to be to survey employers of vocational graduates.

Methodology. A questionnaire was mailed to the total population of 778 former students, both school completers and leavers. The response rate for former students was 63 percent. Ninety-two percent of the former students granted permission to contact their employer. Neither the number of employers surveyed nor their response rate was given in the report.

Findings. Results showed that the majority of employers felt former students' quality of work was acceptable or high; that former students had no difficulty in following directions; that the students showed interest in their work; that they worked well with others, and that they were capable of advancement.

- A Report to the Iowa Department of Public Instruction on Employer Reactions to Employees Trained in Preparatory Career Education Programs. Iowa City, IA: American College Testing Program, 1977. ED 155 493

  Objectives. According to the authors, this was designed as a pilot study to determine if employer evaluations could be collected and analyzed in a meaningful way.

  Methodology. A survey instrument was administered through interviews with 229 employers of 300 graduates of Iowa preparatory career programs. Graduates had completed school in the spring of 1974 and identified their employers one year later in the spring of 1975. Interviews were completed for 252 employees.

  Findings. Employers were found to be generally pleased with the abilities of the graduates when first hired. Over two thirds were evaluated as having "very good" or "good" job skills and technical knowledge. Some employers indicated they would have liked the employee to have more technical training. Employers were generally satisfied with the quality and quantity of work, job skills, technical knowledge, work attendance, punctuality, cooperation, and compliance of graduates. Employers also indicated concern over willingness to accept responsibility and their need for supervision.

- Slick J. M., and Welch, F. G. An Evaluation of Cooperative Vocational Education Programs in Pennsylvania. University Park, PA: The Pennsylvania State University, Department of Vocational Education, 1974. ED 113 452

Objectives. The study was designed as a comprehensive evaluation of three types of vocational programs: (1) total in-school vocational programs, (2) the capstone program (in-school program) followed by a cooperative program during the senior year, and (3) a totally cooperative program.

Methodology. A questionnaire was mailed to the graduates of three types of vocational education programs in seven schools. A questionnaire was also mailed to employers of those graduates who gave permission for employer contact. The graduate return rate was 67 percent; the employer return rate was 58 percent.

Findings. Employers tended to rate cooperative graduates higher in several areas than graduates of total in-school programs. The authors note, however, that the selectivity of the cooperative programs may account for differences. Graduates of all programs were well regarded by responding employers.

- Snyder, F. A.; Selgas, J. W.; and Blocker, C. E. The Employment of Career Graduates. Harrisburg, PA: Harrisburg Area Community College, 1972. ED 065 117

  Although dated, this study involved a collection of employer evaluations of community college career graduates from personnel officers of firms and from immediate supervisors of the graduates. Considerable divergence was shown in ratings by immediate supervisors and personnel officers.

- Two Year Assessment of Michigan's Vocational Education Graduates, Instructors and Employers. Amherst, MA: Carkhuff Associates, Inc., 1977.

  Objectives. This study was designed to collect data from secondary and postsecondary level graduates, instructors, and employers over a two-year period. Four types of questions were addressed in the employer survey: (1) What types of graduates are preferred by employers? (2) How do employers rate the competencies of graduates? (3) How do employers rate their influence on the development of student training programs? and (4) What is the relative cost effectiveness (from the employer perspective) of different types of training programs?

  Methodology. Questionnaires were mailed to employers identified by graduates. Return rates were 37 percent and 41

percent respectively for the two years. The return rate was lower than the authors considered desirable.

Findings. In the first year survey, 65 percent indicated a preference for vocational graduates, while 68 percent so indicated in the second year survey. In both years, employers expressed a preference for graduates with cooperative experiences. Employers rated vocational and nonvocational graduates on fifteen areas of competence. Employers were positive in their ratings of both types of graduates, but were more favorable toward vocational graduates. The only concerns identified for both groups were in areas of reading and math skills. Smaller employers in this study were more pleased with vocational graduates than were larger employers. The majority of responding employers had not been asked to participate in vocational education in any way. Employers indicated that cooperative vocational education graduates represented good investments because they cost less to recruit, hire, and train; they become contributing members of the firm more rapidly; and they were likely to remain with the company longer. Comparisons between vocational and nonvocational graduates' competencies indicated significant differences in favor of vocational graduates on 29 of the 30 items listed.

- Wenzel, G. G., and Corson, H. An Employment Study of Miami-Dade Community College 1972-1973 Career Education Students and Their Employers. Miami, FL: Miami Dade Community College Office of Institutional Research, 1975. ED 122 909

Objectives. The study was designed to evaluate 52 two-year technical, business, and occupational programs on the basis of feedback from former students and their employers.

Methodology. A sample of 2,039 students who were enrolled in a career program during 1972-1973 and did not re-enroll after that time were mailed questionnaires. Nine hundred fifteen employers were also mailed questionnaires with the permission of former students. The student response rate was 40 percent while the employer response rate was 72 percent. Student respondents had completed from one course to several terms.

Findings. Employers rated the former students on the following worker characteristics: depth of knowledge, understanding of theory, performance of job skills from beginning of employment, familiarity with equipment from beginning of employment, range of knowledge required by job, ability to communicate, and ability to get along with

coworkers. The majority of the former students were rated "good" or "excellent" in each of these categories.

- Willett, L. H., and Piland, W. E. Employer Evaluation of Occupational Programs. Palos Hills, IL: Moraine Valley Community College, 1973. ED 078 819

  Objectives. This study was designed to elicit employer evaluations of individual graduates along three dimensions: (1) technical skills, (2) human relations skills, and (3) problem-solving skills.

  Methodology. A questionnaire was sent to all employers who hired 1969-1971 occupational graduates of Moraine Valley Community College. The employer response rate was 80 percent and a subsample was selected for personal interviews.

  Findings. Factor analyses revealed that employers were using a two-dimensional structure for rating employers on technical and human relations skills. Employers rated graduates' overall training as effective or highly effective. Public service graduates were rated slightly higher in technical skills than business or health graduates. Personality factors were most often cited as areas of strength or weakness. Supervisors indicated interest in hiring future graduates.

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